REMARKS/ARGUMENTS

Claims 1, 4-13, and 15-18 are pending. Applicants thank the Examiner for withdrawal of the rejection under 35 U.S.C. §112, second paragraph.

I. Status of the claims

Claim 1 is amended to recite conditions associated with fetal alcohol syndrome (FAS) that are reduced by treatment with ADNF peptides. Support for this amendment is found throughout the specification, for example at page 7, lines 19-27; page 17, lines 1-4, and original claims 15-18. This amendment adds no new matter.

New claim 45 is directed to the method of claim 1 using a mixture of an ADNF I polypeptide of SEQ ID NO:1 and an ADNF III polypeptide of SEQ ID NO:2. Support for this amendment is found throughout the specification, for example at page 3, line 30 through page 4, line5; Figures 1-3 and their respective figure legends at page 5, lines 1-30; and page 17, lines 8-13. This amendment adds no new matter.

New claim 46 is directed to the method of claim 1 with the limitation that the ADNF polypeptide is administered before alcohol exposure. Support for this amendment is found throughout the specification, for example at Figures 1-3 and respective figure legends at page 5, lines 1-30; page 35, line 24 through page 36, line 3; and page 37, lines 1-10. This amendment adds no new matter.

II. Rejections under 35 U.S.C. §112, first paragraph enablement.

Claims 1, 4-13, and 15-18 are rejected under 35 U.S.C. §112, first paragraph for allegedly lacking enablement. In order to expedite prosecution Applicants have amended claim 1 to recite conditions associated with fetal alcohol syndrome (FAS) that are reduced by treatment with ADNF peptides. This amendment adds no new matter. However, the Office Action also alleges that the specification does not provide enablement for ADNF polypeptide dosages and timing of administration, in particular for administration of ADNF polypeptides after exposure to alcohol.

Applicants respectfully traverse the rejection. The test of enablement is "whether one skilled in the art could make or use the claimed invention from the disclosure in the patent coupled with information known in the art without undue experimentation" (*see, e.g.*, MPEP §2164.01). In addition, claims reading on inoperative embodiments are enabled if the skilled artisan understands how to avoid inoperative embodiments. (*See, In re Cook and Merigold*, 169 USPQ 299, 301 (C.C.P.A. 1971)).

The specification discloses methods to determine the dosage and timing of ADNF polypeptides using, at most, routine experimentation. Methods to determine dosage and timing of administration of ADNF polypeptides generally are found at page 19, lines 23-29. An art accepted mouse model is specifically exemplified for administration of ADNF polypeptides to reduce conditions associated with FAS in the Examples section, see *e.g.*, page 32, line 27 through page 33, line 5. In addition, dosages for the model system are given at page 19, lines 20-22, with the recognition that one of skill could extrapolate to an appropriate dosage for a human subject.

In a response filed December 26, 2001, Applicants submitted a post-filing reference authored by the inventors demonstrating that the methods disclosed in the application can be routinely varied by one of skill and used to determine dosage and timing of administration of ADNF polypeptides, including time points following ethanol exposure. The reference demonstrates that the same methods disclosed in the application, with minor changes in timing of administration of ADNF relative to ethanol exposure, can be used to determine dosage and timing of administration of ADNF polypeptides after ethanol exposure. For example, the reference shows that fetal demise is decreased when ADNF polypeptides are administered one hour after ethanol exposure, but that fetal demise is not affected by administration of ADNF polypeptides three hours after ethanol exposure. Thus, one of skill would be able to routinely use the disclosed methods to determine the appropriate dosage and timing of administration of ADNF polypeptides both before and after ethanol administration. Without admitting a lack of operation at the three hour time point under all conditions, Applicants also assert that the

reference demonstrates that one of skill would be able to use the disclosed methods to identify inoperative embodiments of the claimed invention.

Finally, Applicants have also submitted a declaration of Dr. Douglas Brenneman, an inventor, asserting that treatment with ADNF polypeptides is effective in reducing conditions associated with fetal alcohol syndrome when given before or after administration of alcohol, and that one of skill in the art can practice the claimed methods using information provided in the specification, together with methodology known to one of skill in the art, with at most, only routine experimentation.

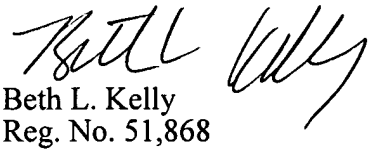
Given the disclosure in the application as filed, the post-filing experimental data, and the declaration of Dr. Brenneman, Applicants assert that the claims as written are fully enabled by the specification. Applicants, thus, respectfully request that the rejection for alleged lack of enablement be withdrawn.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is urged.

If a telephone conference would expedite prosecution of this application, the Examiner is invited to telephone the undersigned at 415-576-0200.

Respectfully submitted,



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173. Gozes, I., Giladi, E., Pinhasov, A., Golian, T., Romano, J. and Brenneman, D.E. Activity-dependent neurotrophic factor (ADNF): comparison of intranasal and oral administration of femtomolar-acting L- and D- peptides to improve memory. Soc. Neurosci. Absts. 26: 588, 2000.

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175. Spong, C.Y., Abebe, D.T., Gozes, I. and Brenneman, D.E. All D-amino acid peptides prevent fetal death in a mouse model of fetal alcohol syndrome. Soc. Neurosci. Abst. 26:588, 2000.

176. Zamostiano, R., Pinhasov, A., Gelber, E., Steingart, R., Giladi, E., Bassan, M., Hauser, J., Wollman, Y., Eyre, H.J., Mulley, J.C., Seroussi, E., Brenneman, D.E. and Gozes, I. Cell proliferation inhibition by oligodeoxynucleotides complementary to activity-dependent

neuroprotective protein (ADNP) mapped to a chromosomal region amplified in cancer. Soc. Neurosci. Absts. 26: 588,2000

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178. Hill, J.M., Mehnert, J., Brenneman, D.E. VIP and PACAP regulation of NGF in the E9.5 mouse embryo neural tube. Soc. Neurosci. Absts. 26: 586,2000.

179. Brenneman, D.E., Hauser, J. And Gozes, I. Neuroprotective peptides that exhibit both synergistic and non-chiral characteristics in dissociated cerebral cortical test cultures. Soc. Neurosci. Absts. 26:588, 2000.

180. Spong, C.Y., Abebe, D.T., Gozes, I., Brenneman, D.E. and Hill, J.M. Prevention of fetal death with novel peptides in fetal alcohol syndrome. Am. J. Obst. Gynecol. 182:15, 2000.

181. Hill, J.M., Mehnert, J., Phillips, T.M., and Brenneman, D.E. VIP and PACAP regulation of growth factors/cytokines in E9.5 mouse embryo neural tube. Regulatory Peptides 89: 64, 2000.

182. Spong, C.Y., Abebe, D., Auth, J., Gozes, I., Hill, J.M. and Brenneman, D.E. Peptides prevent alcohol-induced fetal death, biochemical alterations and leaning problems. Regulatory Peptides 89: 82, 2000.

183. Brenneman, D.E., Hauser, J., Ades, A., Hill, J.M., Ring, M., McCune, S.K., Crnic, L.S. and Phillips, T.M. VIP-mediated interactions with cerebral cortical cultures derived from partial trisomy 16 (Ts65Dn) mice: implications for Alzheimer's disease.
Regulatory Peptides 89: 55, 2000.

184. Brenneman, D.E., Spong, C.Y., Hauser, J., Gozes, I. Neuroprotective peptides prevent neuronal and embryonic death. Abst. Of Am. Chem. Soc. 219:315, 2000.

185. McCune, S.K., Brenneman, D.E. and Hill, J.M. Expression profile of signal transduction and cytokine genes in control and VIP-stimulated E9.5 neural tubes.
Soc. Neurosci. Absts. 27: 138.7, 2001.

186. Brenneman, D.E., Hauser, J.M., Phillips, T.M. and Gozes, I. Neurotrophic peptides (NAP and ADNF-9) produce cytokine and chemokine secretion in cultured astrocytes. Soc. Neurosci. Absts. 27: 364.4, 2001.

187. Gozes, I., Zaltzman, R., Alcalay, R., Romano, J., Giladi, E., Beni-Adani, L., Beni, S., Hill, J.M., Leker, R.R., Shohami, E. And Brenneman, D.E. NAP, a peptide derived from activity-dependent neuroprotective protein, provide a broad range of long-term neuroprotection. Soc. Neurosci. Absts. 27:364.5, 2001.

188. Hill, J.M., Hauser, J.M., Furman, S., Gozes, I., Brenneman, D.E. Localization of Activity-dependent neuroprotective protein-like immunoreactivity in the neonatal rat brain. Soc. Neurosci. Absts. 27: 364.7, 2001.

189. Hauser, J.M., Gozes, I., Furman, S., Giladi, E., Rubinraut, S., Fridkin, M., Spong, C.Y., Brenneman, D.E. Neuroprotective peptide exhibits stability in vivo and in vitro. Soc. Neurosci. Abst. 27:364.8, 2001.

AWARDS & Honors

1. Bond Award - Best technical paper contributed at national meeting of American Oil Chemists' Society.

2. Fellowship for graduate study from Lilly Pharmaceutical Company.

3. Newmark Award - Outstanding biochemical research, University of Kansas.

4. Speaker representing all doctoral students for the Ph.D. Hooding Ceremony, University of Kansas.

5. PRAT (Pharmacology Research Associate Trainee)- Fellowship for postdoctoral training at NIGMS (1980-81).

6. Intramural Research Grant for AIDS structural biology initiative (1987-88).

7. Equal Employment Opportunity Special Achievement Award, NICHD, 1989.

8. United States-Israel Binational Science Foundation Research Grant with Dr. Illana Gozes on Activity Dependent Neurotrophic Factor; 1992-1995.

9. Guest Editor for Journal of Molecular Neuroscience. Special Topic: Neuropeptides as Growth Factors, 1993

10. NIH Merit Award, 1993

11. NIH Director's Award, 1997.

12. Collaborative Research Agreement for ADNF research, Pfizer Corporation, Tel Aviv University and NICHD. (1997-1998).

13. United States-Israel Binational Science Foundation Research. Grant with Dr. Illana Gozes on ADNF III. 1997-1999.

14. Editorial Board for the Journal Neuropeptides 1998-

15. Scientific Advisory Board for the 4th International Symposium on VIP, PACAP, Glucagon and related peptides. 1998

16. Appointed to Steering Committee for the Winter Neuropeptide Conference, 1998-

17. Editorial Board for the Journal of Molecular Neuroscience 1999-

18. Election as permanent member of the International Organizing Committee for the Symposium on VIP, PACAP, Glucagon and related peptides. 1999-present

19. United States-Israel Binational Science Foundation Research. Grant with Dr. Illana Gozes on ADNP. 2000-2002.

20. The 2000 Neufeld Memorial Research Grant Award. This award is given annually to the most outstanding and original Binational Science Foundation-supported project in the health sciences. Co-recipient with Dr. Gozes for the ADNP Grant.

U.S. and Foreign Patents Pending or Awarded

1. Activity Dependent Neurotrophic Factor, Brenneman and Gozes, 1990
U.S. Patent awarded, Issued June 16, 1998. Patent No. 5,767,240.

2. VIP receptor antagonist, Gozes, Moody, Fridkin and Brenneman, 1991.
U.S. Patent No. 5,217,953

3. Superactive VIP Antagonists. Gozes, Brenneman, Fridkin and Moody, 1994.
U.S. Patent No. 5,565,424, Awarded on October 15, 1996.

4. Neurotrophic peptides of ADNF. Brenneman and Gozes, Inventors
U.S. Patent No. 6,174,862 B1. Awarded January 16, 2001.

5. Activity Dependent Neurotrophic Factor Brenneman and Gozes, 1992
Australian Patent No. 21680/92

6. Brenneman, D.E. and Gozes, I. Activity Dependent Neurotrophic Factor. European Patent No. 92913651.3

7. Mouse cDNA Structure of a Novel Neurotrophic Protein: Activity Dependent Neurotrophic Factor III: Identification of a core 8 Amino Acid Neurotrophic Peptide. Gozes, Brenneman, Basan, Zamostiano, 1997. Patent pending

8. Orally active peptides that prevent cell injury and death. Brenneman, Spong, Gozes, Pinhasov and Giladi. Patent pending 1999 60/149,956.

9. Prevention of fetal alcohol syndrome and neuronal cell death with ADNF polypeptides. Brenneman, Spong, Gozes, Bassan and Zamostiano. Patent pending
1999.

10. Neurotrophic peptides of ADNF, Nov. 4, 1999, Australian Patent No. 707838

11. Methods of inhibiting cancer cells with ADNF III antisense oligonucleotides. Gozes, Brenneman, Zamostiano, Gelber, Pinhasov, Bassan. 1999 Patent pending.

12. Combination Therapy with VIP Antagonist. Gozes, Moody, Brenneman, Fridkin, Gelber and Levy. 1999 Patent Pending.

13. Vasoactive intestinal peptide derived lipophilic conjugates for treatment of skin disorders. Gozes, Granoth, Fridkin and Brenneman 2000 Patent pending
No. 136631

14. Novel peptides enhance performance in spatial learning. Gozes, Giladi, Spong and Brenneman 2000 Patent pending

15. Human Activity-Dependent Neurotrophic Factor III (ADNF III) Gozes, Brenneman, Basan, Zamostiano. U.S application 09/267,411

16. Superactive VIP Antagonists Moody, Gozes, Brenneman and Fridkin. European Patent No. 0738280 Granted 2/14/2001.

17. Neurotrophic peptides of the ADNF Complex. Brenneman, Gozes, Castellon, and Spong. 9/1/01.

Membership in Professional Organizations

1. American Association for the Advancement of Science

2. Society for Neuroscience

3. International Society for Developmental Neuroscience

4. American Society for Pharmacology and Experimental Therapeutics

Membership in NIH Committees

1. NICHD Safety Committee (Chairman) (1990-1997)

2. ICD Safety Committee (1990-1997)

3. NIH Occupational Safety and Health Committee (1990-1994)

4. Laboratory and Animal Users Committee for Building 49 (1994-95)

5. Howard Hughes Medical Scholar Selection Committee (1996-1998)

6. NICHD Animal Care and Use Committee (2000-present)

Invitations for Presentations

1. 1982 University of Illinois Department of Anatomy

2. 1982 University of Indiana Department of Pharmacology

3. 1982 Sandoz Pharmaceutical Co. Toxicology Department

4. 1983 Louisiana State University Department of Pharmacology

5. 1983 Georgetown University Department of Biology

6. 1984 Society for Neuroscience Los Angeles, CA.

7. 1984 FASEB Summer Research Conference on Cell Cultures

8. 1985 Johns Hopkins University Department of Neuroscience.

9. 1985 Canadian Federation of Biological Societies. Symposium on Cholinergic Neurons.

10. 1985 Winter Neuropeptide Conference in Breckenridge Colo. Symposium on Neuropeptides as regulators of development.

11. 1986 George Washington University Department of Biochemistry.

12. 1987 New York Academy of Sciences. Conference on Vasoactive intestinal peptide.

13. 1987 NICHD Centennial Symposium on Neurodevelopment

14. 1987 Society of Neuroscience. Chairman of session on Neuronal Cell Death.

15. 1988 Winter Brain Conference. Symposium on Neuron-Glia interactions. Steamboat Springs, Colo.

16. 1988 American Society for Microbiology. Symposium on CNS manifestations of HIV infection. Miami, Florida.

17. 1988 Winter Neuropeptide Conference. Symposium on Neurotrophic peptides. Breckenridge, Colo.

18. 1988 American Society for Pharmacology and Experimental Therapeutics. Symposium on Neuropeptides as regulators of mitosis: clinical implications. Las Vegas, Nevada.

19. 1988 UCLA conference on neural-immune interactions. Symposium on HIV and the nervous system. Lake Tahoe, CA

20. 1988 International Society for Developmental Neuroscience. Symposium on synapse formation and elimination. Jerusalem, Israel.

21. 1988 International Society for Developmental Neuroscience.Symposium on Ontogeny of Neuropeptides. Jerusalem, Israel.

22. 1988 XVIthe Collegium Internationale Neuro-Psychopharmacologicum. Symposium on AIDS. Munich, Federal Republic of Germany.

23. 1989 Winter Brain Conference. Symposium on AIDS and the nervous system. Snowbird, Utah.

24. 1989 American Society of Neurochemistry. Symposium on neuron-glial interactions. Chicago, Ill.

25. 1989 4th International Conference on VIP. Talk on glial proteins and VIP. Stockholm, Sweden.

26. 1990 University of Alabama/NICHD Conference on Environmental Determinants of Nervous system Development. Co-organizer of session on Molecular and Cellular Developmental Mechanisms. Birmingham, Alabama.

27. 1990 Society for Neuroscience symposium on Growth Factors and Glia. St. Louis, Mo.

28. 1990 Chicago Lung Association. Talk on interactions between neuropeptides and cytokines. Chicago, Ill.

29. 1991 Winter Brain Conference Symposium on neurotoxic effects of gp120, the envelope protein of HIV. Vail, Colorado.

30. 1991 Sixth Annual Christian Anfinsen Seminar Series in the Neurosciences. Talk on regulation of neuronal cell death during development. NIH.

31. 1991 Satellite Symposium on PACAP. Co-organizer of an international symposium on PACAP, chairman of session on PACAP physiology, and talk on developmental effects of PACAP. New Orleans, Louisiana.

32. 1991 Department of Anatomy, West Virginia University School of Medicine. Talk on VIP as a mediator of neuron-glia interactions.

33. 1991 Workshop on Neuro-AIDS: drug discovery and development sponsored by NIAID. Talk on gp120 neurotoxicity. Portland, Maine.

34. 1992. Department of Biological Science, Rutgers University
Talk on Permissive glial-derived growth factors.

35. 1992. Pharmavene Corp., New York City, Talk on Activity Dependent Neurotrophic Factor.

36. 1992. Symposium on Neuropeptides as Developmental Cues. Winter Neuropeptide Conference, Breckenridge, Colo.

37. 1992, Faculty of Medicine Lecture on Neuron-Glial interactions. Tel Aviv University, Tel Aviv, Israel.

38. 1992. Plenary Talk on NeuroAIDS at Israel Society for Clinical Biochemistry, Haifa, Israel.

39. 1992. Synergen Corp. Talk on Activity Dependent Neurotrophic Factor., Boulder, Colorado.

40. 1992. Psychoneuroimmunology Program, UCLA, Talk on the developmental and pathological aspects of cytokines in the brain. Los Angles, California.

41. 1992. Symposium on Mechanisms of Neurological Damage in AIDS. Society of Neuroscience, Anaheim, California.

42. 1992. Second Workshop on Neuro-AIDS. Talk on Toxic Fragments of Gp120., Portland, Maine.

43. 1992. Neurology Department. Johns Hopkins School of Medicine. Talk on Neurotoxicity of gp120 in vitro and in vivo. Baltimore, MD.

44. 1992. Symposium on Activity and Neuronal Development. International Society for Developmental Neuroscience., Montpelier, France.

45. 1993 Symposium on the Neurological aspects of cytokines. American Society for Neurochemistry, Richmond, VA.

46. 1993 Symposium on the Neurotrophic Actions of Cytokines. International Society for Neurochemistry, Montpelier, France.

47. 1993 Department of Pharmacology. University of Kansas, Talk on Molecular pharmacology of VIP neurotrophism. Lawrence, Kansas.

48. 1993 Symposium on PACAP and VIP as regulatory molecules, 14th Annual Winter Neuropeptide Conference, Breckenridge, Colorado.

49. 1993 Learning Disabilities Society. Talk on Multidisciplinary approaches to developmental toxicology. San Francisco, California.

50. 1993 Symposium on VIP functions in the Brain, First International meeting on PACAP, VIP and related peptides. Strasbourg, France.

51. 1993 Symposium on Growth Factors and Neuronal Cell Death. Israeli Society for Clinical Biochemistry and Tel Aviv University, Tel Aviv, Israel.

52. 1993 Department of Neuroscience. University of Miami Medical School. Talk on Activity Dependent Neurotrophic Factor. Miami, Florida.

53. 1993 Third annual Neuro-AIDS conference sponsored by NIAID. Talk on activity dependent neurotrophic factor and gp120-induced neurotoxicity. Portland, Maine.

54. 1993 European Neuroendocrine Association. Symposium on Neuropeptides and Growth Factors. Lisboa, Portugal.

55. 1994. Symposium on cytokines in the nervous system. FASEB Summer Research Conference, Cooper Mountain. Colorado.

56. 1994. Chairman of Symposium on Growth Factors and cytokines at International Conference on Growth Factors, Hormones and Drug Design, Israeli Ministry of Science and Arts. Talk on Activity dependent neurotrophic factor. Tiberius, Israel.

57. 1994. Organizing Committee for Second International Symposium on VIP, PACAP and related peptides. New Orleans, LA.

58. 1994 Chairman of Symposium on Neurotrophic Peptides and Peripheral Nerve Regeneration. 15 th Annual Winter Neuropeptide Conference. Talks on Neuropeptide Drug Design and Neuropeptide regulation of embryonic growth. Breckenridge, Colorado.

59. 1994. Symposium on Neurotrophic peptides and Drug Design. Summer Neuropeptide Conference. Martha's Vineyard, MA.

60. 1994. Talk on VIP antagonist producing microcephaly. European Society for Neurochemistry. Jerusalem, Israel.

61. 1994. Chairman of Session on 'Neuropeptides, their antagonists and drug development. European Society for Neurochemistry. Jerusalem, Israel.

62. 1994. Chairman of Symposium on Cytokine-Neuropeptide interactions at Summer FASEB conference on Neuro-Immune Interactions. Cooper Mountain, Colorado.

63. 1995. Talk on identification of a femtomolar acting neuroprotective peptide. International Society for Neurochemistry. Kyoto, Japan.

64. 1995. Talk on VIP as a regulator of embryonic growth. Satellite meeting on VIP, PACAP and related peptides, International Society for Neurochemistry. Osaka, Japan.

65. 1995. Talk on Activity Dependent Neurotrophic Factor. Pfizer Corp. Groton, Connecticut.

66. 1995. Symposium talk on Mechanism of peptide T-mediated neuroprotection in AIDS. 16th Annual Winter Neuropeptide Conference, Breckenridge, Colorado.

67. 1995. Plenary speaker on Neuropeptide Regulation of Embryonic Development. European Society for Neurochemistry. Jerusalem, Israel.

68. 1995. Talk on Activity Dependent Neurotrophic Factor. Department of Neuroscience. Beijing Medical University, Beijing, China.

69. 1995 Talk on Mechanism of neuroprotection of VIP analogues against NeuroAIDS. Department of Physiology, Georgetown University Medical School.

70. 1996. Symposium Chairman on Mechanisms of VIP and PACAP regulated growth. Winter Neuropeptide Meeting, Breckenridge, Colorado.

71. 1996. Talk on Pharmacology of VIP mediated secretion of glia-derived cytokines. Winter Neuropeptide Meeting, Breckenridge, Colorado.

72. 1996. Talk of VIP mediated regulation of neuronal survival and embryonic growth. Keystone meeting on Neural peptides, Lake Tahoe, California.

73. 1996. Talk on Activity Dependent Neurotrophic Factor. R.T. Johnson Pharmaceutical Research Institute. Philadelphia, PA.

74. 1996. Talk on VIP neurotrophic action mediated by an extracellular stress protein. Summer Neuropeptide Meeting. Martha's Vineyard, Massachusetts.

75. 1996. Talk on A femtomolar activity neuroprotective peptide at Cold Spring Harbor Meeting on the Heat Shock Response and Chaparonins. Cold Spring Harbor, New York.

76. 1996. Talk on Femto-Neurobiology: from CNS ontogeny to Therapeutic Strategy. University of Nebraska Medical School. Omaha, Nebraska.

77. 1997. Talk on Neurotrophic peptides at European Neuropeptide Conference, Kitzbuhel, Austria.

78. 1997. Talk on Activity Dependent Neurotrophic Factor at International Congress on Stress. Budapest, Hungary.

79. 1997. Talk on Activity Dependent Neurotorphic Factor at Biogen Corporation, Boston, MA.

80. 1997. Talk on Neuron-Glia interactions at the International Symposium on Signal Transduction in Health and Disease. Tel Aviv, Israel.

81. 1997. Chairman of session on VIP agonists and antagonists. Third International Symposium on VIP, PACAP and Related Peptides. Freiburg, Germany.

82. 1997. Talk on a femtomolar-acting neuroprotective peptide. Third International Symposium on VIP, PACAP and Related Peptides. Freiburg, Germany.

83. 1997. Talk on activity dependent neurotrophic factor. Department of Neuroscience. University of Maryland. Baltimore, MD

84. 1998. Talk on Neuropeptide-Chemokine interactions that mediate neuroprotection. 19th Annual Winter Neuropeptide Conference,
Breckenridge, Colorado.

85. 1998. Talk on Mechanisms of ADNF Neuroprotection. Symposium at European Neurochemistry Society. St. Petersburg, Russia.

86. 1998. Co-chairman of session on Growth factors in neurodevelopment and aging: potential new therapies. 12th Meeting of the European Neurochemistry Society,
St. Petersburg, Russia.

87. 1999 Plenary Lecture on VIP neurotrophic mechanisms at the 20th Annual Winter Neuropeptdie Conference. Breckenridge, Colorado.

88. 1999 Talk on Chemokines as mediators of VIP neuroprotection. 4th International Symposium on VIP, Glucagon and Related Peptides. Copenhagen, Denmark.
89. 1999 Chairman of the session on Development and Neurotrophic actions of VIP and PACAP. 4th International Symposium on VIP, Glucagon and Related Peptides. Copenhagen, Denmark.

90. 2000 Chairman of Symposium on Neuropeptides and Neuroprotection
21st Annual Winter Neuropeptide Conference. Breckenridge, Colorado.

91. 2000 Talk on PACAP-mediated release of chemokines. 21st Annual Winter Neuropeptide Conference. Breckenridge, Colorado.

92. 2000 Co-Chairman of Young Investigators Symposium.21st Annual Winter Neuropeptide Conference. Breckenridge, Colorado.

93. 2000 Talk on ADNF-mediated neuroprotection. Indiana University School of Medicine. Indianapolis, Indiana.

94. 2000 Talk on Functional VIP deficits in astroglia derived from trisomy mice. European Neuropeptide Conference. Innsbruck, Austria

95. 2000 Talk on Peptide prevent fetal death in pregnant mice treated with alcohol. Sackler School of Medicine, Tel Aviv University.

96. 2000 Talk on Femtomolar-acting neuroprotective peptides. American Chemical Society. San Francisco, California.

97. 2000 Talk on Protective Peptides derived from Novel Glial Proteins. Biochemical Society. Leeds, United Kingdom.

98. 2000 Talk on Neuropeptides and Neuroprotection in the central nervous system. Neuroscience Department. Uniform Services Medical School. Bethesda, Maryland.

99. 2000 Chairman and organizer of Session on Cytokines and Neurodegenerative Disease. Satellite meeting to the Society for Neuroscience. New Orleans, Louisiana.

100. 2000 Talk on Cytokine Release from Astrocytes derived from partial trisomy mouse brain. Cytokines and Brain 2 symposium. New Orleans, Louisiana.

101. 2001 Co-organizer of 22nd annual meeting of the Winter Neuropeptide Conference. Breckenridge, Colorado.

102. 2001 Member of International Advisory Committe to the Neuropeptide 2001 Meeting. Kibbutz Ma'le Hachamisha, Israel.

103. 2001 Talk on Novel Peptide Mediators of VIP-associated neuronal survival: potential leads for drug design. At Peptide Receptors Symposium Montreal 2001
Montreal, Canada

104. 2001 Sam Hersch Symposium on Cerebral Palsy. Talk on neuroprotective peptide agonists from ADNF and ADNP. Salk Institute, San Diego, CA.